(54) **SPEECH RECOGNITION APPARATUS AND METHOD WITH ACOUSTIC MODELLING**

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(57) **ABSTRACT**

Provided is a speech recognition apparatus. The apparatus includes a preprocessor configured to extract select frames from all frames of a first speech of a user, and a score calculator configured to calculate an acoustic score of a second speech, made up of the extracted select frames, by using a Deep Neural Network (DNN)-based acoustic model, and to calculate an acoustic score of frames, of the first speech, other than the select frames based on the calculated acoustic score of the second speech.